

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington D.C. 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services	)	WT Docket No. 12-70
in the 2000-2020 MHz and 2180-2200 MHz	)	
Bands	)	
	)	ET Docket No. 10-142
Fixed and Mobile Services in the Mobile	)	
Satellite Service Bands at 1525-1559 MHz	)	
and 1626.5-1660.5 MHz, 1610-1626.5 MHz	)	
and 2483.5-2500 MHz, and 2000-2020 MHz	)	
and 2180-2200 MHz	)	WT Docket No. 04-356
	)	
Service Rules for Advanced Wireless Services	)	
in the 1915-1920 MHz, 1995-2000 MHz,	)	
2020-2025 MHz and 2175-2180 MHz Bands	)	

**COMMENTS OF AT&T**

**AT&T Services, Inc.**

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## EXECUTIVE SUMMARY

The proposals in the *Notice of Proposed Rulemaking* (“*NPRM*”) and *Notice of Inquiry* (“*NOI*”) advance a key spectrum objective of the 2010 *National Broadband Plan* (“*NBP*”): repurposing 40 megahertz of 2 GHz band Mobile Satellite Service (“*MSS*”) spectrum for terrestrial mobile use. AT&T applauds the Commission’s recognition of the urgent need for additional spectrum resources to support the exploding demand for mobile broadband services and supports the Commission’s efforts to leverage *MSS* spectrum for this purpose. Consistent with the *NBP*’s objective, the Commission should ensure that the rules adopted in this proceeding maximize the use of the 2 GHz band for mobile broadband service.

Accordingly, this proceeding should not be driven by concerns about preserving 2 GHz *MSS* operations. Instead the *AWS-4* band plan and service rules should maximize the usefulness of the 2 GHz band for commercial mobile broadband services by promoting licensee flexibility and the integration of the band with existing commercial mobile operations.

To this end, the Commission should:

- Authorize terrestrial mobile operations throughout the 2 GHz *MSS* band and limit *MSS* operations to the 20 megahertz A Block;
- Promote new terrestrial mobile use of the band that protects existing *PCS* and *AWS* operations by adopting a consistent duplex spacing for the *AWS-4* band, shifting the *AWS-4* uplink band up five megahertz, and applying out-of-band emissions limits that are consistent with other Commercial Mobile Radio Service (“*CMRS*”) bands;
- Maximize *AWS-4* licensees’ flexibility to design their networks in the manner that best serves consumers; and
- Adopt performance requirements that harmonize the objectives of achieving a rapid nationwide deployment of *AWS-4* and promoting rational and market-driven network deployment.

The proposals herein advance the objective of expeditiously introducing robust mobile broadband service to the S-band, as proposed in the *NPRM*. However, to the extent the

Commission elects to pursue the alternative vision articulated in the *NOI* and to engage in a holistic reexamination of the terrestrial mobile band plan, AT&T supports the 2 GHz Extension Band Concept. The *NOI* proposal would incorporate the 2 GHz MSS spectrum with Federal spectrum resources and other currently unused terrestrial mobile allocations to advance the rationalization of the 2 GHz band while freeing up a substantial amount of usable spectrum. Importantly, the 2 GHz Extension Band Concept preserves the possibility of extending the AWS-1 band by pairing 1755-1780 MHz with the AWS-3 and upper J-Block spectrum at 2155-2180 MHz. As Chairman Genachowski announced at CTIA, he envisions that this spectrum could be reallocated and auctioned within 3 years.<sup>1</sup> If the Commission elects to pursue this alternative vision, it promptly should release a Notice of Proposed Rulemaking so clarifying.

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<sup>1</sup> See Julius Genachowski, Chairman, Federal Communications Commission, Prepared Remarks to International CTIA Wireless 2012 at 13, New Orleans, LA, May 8, 2012 *available at* [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db0508/DOC-313945A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0508/DOC-313945A1.pdf).

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**COMMENTS OF AT&T**

ATT Services, Inc., on behalf of AT&T, Inc. and its subsidiaries (“AT&T”), hereby responds to the Federal Communications Commission’s (“Commission”) Notice of Proposed Rulemaking and Notice of Inquiry (“Notice”) proposing to introduce terrestrial mobile broadband services in 2000-2020 MHz and 2180-2200 MHz bands (“2 GHz band”).<sup>2</sup> As the Commission details in the Notice, the “explosive growth [in mobile broadband] is creating an urgent need for more network capacity and, in turn, for suitable spectrum.”<sup>3</sup> AT&T applauds the Commission’s steps toward freeing up the 2 GHz band and submits these comments to provide input on how to most efficiently re-purpose this spectrum for mobile broadband use.

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<sup>2</sup> Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142, *Notice of Proposed Rulemaking and Notice of Inquiry*, FCC 12-32 (rel. Mar. 21, 2012) (“Notice”).

<sup>3</sup> *Id.*, ¶ 10.

**I. TO REDUCE THE COORDINATION AND INTERFERENCE CHALLENGES ASSOCIATED WITH AUTHORIZATIONS FOR BOTH MSS AND AWS-4 IN THE SAME SPECTRUM, THE COMMISSION SHOULD LIMIT THE MSS AUTHORIZATIONS TO A SINGLE 20 MHZ LICENSE .**

The Commission should transition the 2 GHz band to its highest and best use by authorizing terrestrial mobile operations throughout the band and limiting MSS to the 20 megahertz A Block.<sup>4</sup> There is no need to allow the MSS allocation to drive the use of 40 megahertz of spectrum where neither historic use of the band, nor projected future use, suggest that 40 megahertz is needed for MSS. By limiting MSS to the A block, the Commission would be freeing the 20 megahertz B Block for AWS-4 mobile broadband service without MSS obligations.

Because the provision of MSS does not require 40 megahertz of spectrum, the Commission should not allow preservation of the MSS allocation to constrain its efforts to re-purpose the 2 GHz band for mobile broadband. MSS has not prospered in the 2 GHz band. Despite issuance of initial MSS licenses in 2001, the band today remains largely unused following the recent bankruptcies of the two remaining MSS licensees. Prior to its acquisition by DISH Network, TerreStar offered only minimal commercial service through a single device made available in partnership with AT&T. DBSD has fared even worse, never having offered commercial MSS in the 2 GHz band.

To the extent that there is an unmet demand for 2 GHz MSS service, a single 20 megahertz allocation should be sufficient. Both DBSD and TerreStar were licensed to provide nationwide MSS within a 20 megahertz allocation. Indeed, the DBSD and TerreStar systems

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<sup>4</sup> For purposes of this pleading, references to the 2 GHz band A Block spectrum mean 2005-2015/2180-2190 MHz, and references to the B Block spectrum mean 2015-2025/2190-2200 MHz. This is consistent with the band configuration proposals discussed, *infra*, at Section II.

previously were authorized for as little as 8 megahertz of spectrum each.<sup>5</sup> The Commission expanded their authorizations to 20 megahertz in 2005 based on a finding that additional spectrum would enable them to provide public safety and rural services, compete more effectively with other MSS operators, and provide new services, such as mobile broadband.<sup>6</sup> However, in light of the failure of these services to materialize, the consolidation of the two MSS systems, and the demonstrated need for terrestrial mobile broadband spectrum, there is an adequate basis for the Commission to find now that 20 megahertz of 2 GHz spectrum is sufficient to support MSS.

Given the limited spectrum needed for the provision of MSS, the Commission should: (1) combine the 2 GHz band MSS licenses; (2) assign new AWS-4 licenses for both the A and the B Block spectrum; and (3) reduce the MSS authorization to the A Block spectrum. Making these changes will maximize use of the band for mobile broadband while preserving sufficient spectrum for MSS operations.

As the Notice makes clear, the Commission's objective in this proceeding is to repurpose the 2 GHz band for terrestrial mobile use, in accordance with the National Broadband Plan.<sup>7</sup> Explosive growth in bandwidth consumptive wireless devices and services threatens to create a near-term spectrum capacity shortage. Indeed, President Obama and the Commission have established a goal of identifying and bringing to market in the near term 500 megahertz of

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<sup>5</sup> Use of Returned Spectrum the 2 GHz Mobile Satellite Service Frequency Bands, IB Docket Nos. 05-220, 05-221, *Order*, 20 FCC Rcd 19696, ¶ 26 (2005) (discussing 2 GHz MSS licensee's spectrum assignments of 4 megahertz in each direction).

<sup>6</sup> *Id.*, ¶¶ 26, 37.

<sup>7</sup> Notice, ¶ 1.

mobile broadband spectrum to address the looming spectrum shortage.<sup>8</sup> The National Broadband Plan provides for up to 90 megahertz of this total to come from repurposing underutilized MSS spectrum, and for 40 megahertz to come from the 2 GHz band.<sup>9</sup> While it may be in the public interest to maintain the availability of MSS in the 2 GHz band, the allocation of this spectrum for both MSS and terrestrial mobile broadband presents formidable coordination and interference challenges. Limiting MSS to the A block would leave ample capacity to meet demand for MSS services, while also leaving 20 of the 40 MHz of AWS 4 service free from these coordination and interference concerns.

## **II. AWS-4 SERVICE RULES SHOULD MAXIMIZE THE USE OF THE BAND FOR TERRESTRIAL SERVICES WHILE PROTECTING EXISTING OPERATIONS.**

The AWS-4 service rules should facilitate rapid deployment of mobile broadband service while protecting other heavily-used and commercially successful bands, particularly AWS-1 and PCS. To that end, the Commission should reconfigure the 2 GHz band plan in a way that will promote robust mobile broadband use, including by adopting a consistent duplex spacing for AWS-4, and limiting the potential for interference with PCS by shifting the uplink band up five megahertz and preserving the PCS H Block as a guard band. Additionally, the Commission should adopt AWS-4 out-of-band emissions rules that are consistent with the rules applicable to other Commercial Mobile Radio Service (“CMRS”) bands.

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<sup>8</sup> Connecting America: The National Broadband Plan, Recommendation 5.8 at 84-85 (2010) (“*National Broadband Plan*”), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-296935A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf) (last visited Apr. 30, 2012).

<sup>9</sup> See The White House, Presidential Memorandum: Unleashing the Wireless Broadband Revolution (June 28, 2010), available at <http://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wirelessbroadband-revolution>; *National Broadband Plan*, Recommendation 5.8.4 at 87-88.

**A. The Commission Should Adopt an AWS-4 Band Plan with Consistent Duplex Spacing.**

The Commission should adopt an AWS-4 band plan with consistent duplex spacing, as suggested in the Notice and currently under consideration by the 3<sup>rd</sup> Generation Partnership Project (“3GPP”).<sup>10</sup> The current 2 GHz MSS band plan is configured in an A-B/B-A duplex configuration where the 2000-2010 MHz uplink portion is paired with the 2190-2200 MHz downlink portion, and the 2010-2020 MHz uplink portion is paired with the 2180-2190 MHz portion. This variable duplex spacing is a result of legacy MSS rules allowing operators to select their spectrum allotment upon placing a satellite in orbit,<sup>11</sup> and has no continued relevance with the transition of this band to terrestrial mobile operations.

To facilitate the deployment of terrestrial AWS-4 service, the Commission should adopt an A-B/A-B configuration, similar to the consistent duplex spacing used in other AWS bands and 3GPP standards. Such a configuration would facilitate use of the entire 40 megahertz for mobile broadband and promote flexible and dynamic use of the spectrum. As the Commission notes, 3GPP is in the process of examining a similar proposal to change the relevant LTE Band Class for this spectrum.<sup>12</sup> The Commission should support this change by adopting a AWS-4 band plan with consistent duplex spacing in this proceeding. Additionally, the MSS satellites are designed to operate across the entire band and are capable of providing service under a modified

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<sup>10</sup> See Notice, ¶ 22 (*citing* 3GPP RAN Working Group 4 change request, R4-120615, at 1-2, available at [http://www.3gpp.org/ftp/tsg\\_ran/WG4\\_Radio/TSGR4\\_62/Docs/R4-120615.zip](http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_62/Docs/R4-120615.zip)).

<sup>11</sup> See Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Report and Order*, 15 FCC Rcd 16137, ¶¶ 16.

<sup>12</sup> Notice, ¶ 22.

A-B/A-B configuration.<sup>13</sup> In light of the limited use of legacy MSS in the 2 GHz band, transitioning that service to a conforming A-B/A-B spacing is not likely to be burdensome.

**B. The Commission Should Ensure That The New AWS-4 Licensees Protect Incumbent PCS Operations.**

The Commission should adopt a band plan and service rules that address the potential for interference between AWS-4 and PCS operations. As the Commission recognizes in the Notice, the proximity of the AWS-4 uplink band to the PCS downlink band at 1930-1995 MHz creates the potential for interference to PCS mobile receivers.<sup>14</sup> In the context of proposals to introduce mobile operations to the lower PCS H Block, AT&T has previously explained that PCS devices are highly susceptible to interference from mobile transmitters operating in the spectrum near to the PCS downlink band, because PCS devices were developed with filter characteristics based upon the band plan in place at the time of the creation of the Broadband PCS.<sup>15</sup> This same dynamic exists with respect to the possibility of interference from AWS-4 mobile devices.

Even with the five megahertz guard band of the upper H Block, the minimal spectral separation from PCS downlink spectrum would extract a cost from the AWS-4 uplink link budget, as AWS-4 operations attempt to mitigate potential interference to PCS. In order to prevent mobile-to-mobile interference and meet the necessary out-of-band emissions limitations, AWS-4 mobile devices would have to operate at lower power when in the lower part of the

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<sup>13</sup> See TerreStar Networks Inc., Modification of Letter of Intent Authorization for 2 GHz band Mobile Satellite Service Frequencies, FCC Form 312, Schedule S at 1, IBFS File No. SAT-MOD-20070529-00075, Call Sign: S2633 (Stamp Grant Nov. 28, 2008) (showing operating frequencies of 2000-2020 MHz and 2180-2200 MHz); New ICO Satellite Service G.P., Modification of Letter of Intent Authorization, FCC Form 312, Schedule S at 1, IBFS File No. SAT-MOD-20070919-00129, Call Sign: S 2651 (Stamp Grant Apr. 2, 2008) (same).

<sup>14</sup> Notice, ¶ 35.

<sup>15</sup> See, e.g., Comments of AT&T Inc. at 4-7, WT Docket Nos. 07-195, 04-356 (filed July 25, 2008) (“AT&T H Block Comments”).

2000-2020 MHz band. While AWS-4 systems would be capable of operating pursuant to the Commission's proposed rules in the 2 GHz band as presently configured, they would do so at less than optimal efficiency and thus would not take full advantage of the available spectrum. The Commission should address these concerns by shifting the AWS-4 uplink band up by five megahertz. Additionally, because of substantial interference risks posed by the introduction of mobile services to the 1915-1920 MHz and 1995-2000 MHz H Block, this spectrum should be preserved as a guard band.

**1. The Commission Should Shift the AWS-4 Uplink Band Up Five Megahertz to 2005-2025 MHz.**

As proposed in the Notice,<sup>16</sup> the Commission should shift the AWS-4 uplink band up five megahertz to 2005-2025 MHz. Such a shift would create a 10 megahertz separation between AWS-4 mobile transmissions and the PCS G Block downlink spectrum. This greater separation would enable higher power AWS-4 operations throughout the uplink band, increasing uplink capacity while still providing adequate protection for PCS operations. This proposal would also make productive use of the lower portion of the J Block at 2020-2025 MHz, which otherwise does not have a clear path to mobile broadband use.

**2. The Commission Should Preserve the H Block as Guard Band Spectrum.**

In addition to any other measures taken to protect PCS, the Commission should preserve both the lower and upper H Block (1915-1920 MHz and 1995-2000 MHz, respectively) as guard band spectrum. In the Middle Class Tax Relief and Job Creation Act of 2012 ("Spectrum Act"), Congress instructed the Commission to allocate the H Block for commercial use and grant flexible use licenses through a system of competitive bidding unless the Commission determines

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<sup>16</sup> *Id.*, ¶ 42.

that this spectrum band “cannot be used without causing harmful interference to commercial mobile service licensees in the frequencies between 1930 megahertz and 1995 megahertz.”<sup>17</sup>

The Commission has sought comment on the introduction of commercial mobile services to the H Block in the past,<sup>18</sup> and the record compiled in that proceeding was uniform in its identification of significant interference concerns that would result.<sup>19</sup> In short, this spectrum must be preserved as guard band. Not only would opening the upper H Block to terrestrial services eliminate the existing guard band between the PCS and 2 GHz MSS allocations, introducing mobile operations in the lower H Block would reduce an already narrow PCS duplex gap to just 10 megahertz. Leaving only 10 megahertz of guard band separation between PCS uplink operations at 1850-1915 MHz and PCS downlink operations at 1930-1995 MHz would create a likelihood of self-interference within the PCS band. The Commission should find that, under the requirements of the Spectrum Act, the H Block cannot be made available for commercial mobile use because of the substantial risk of interference to PCS operations.

However, the upper H Block need not lie fallow. Instead, the Commission should initiate a separate proceeding to examine alternative, low-power uses for the upper H Block that would be compatible with the existing and planned adjacent terrestrial operations. For example, the Commission should consider the feasibility of introducing unlicensed operations in this band. If the Commission moves forward with the shift of the AWS-4 uplink band, as AT&T

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<sup>17</sup> See Middle Class Tax Relief and Job Creation Act of 2012, Pub. Law 112-96, §§ 6401(b)(2)(A), (b)(4).

<sup>18</sup> See Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, WT Docket Nos. 07-195, 04-356, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859 (2008).

<sup>19</sup> See, e.g., AT&T H Block Comments, Comments of SpectrumCo LLC, WT Docket. No. 07-195 (filed July 25, 2008); Comments of QUALCOMM Incorporated, WT Docket. No. 07-195 (filed July 25, 2008); Comments of United States Cellular Corporation, WT Docket. No. 07-195 (filed July 25, 2008).

recommends, the 2000-2005 MHz band vacated by AWS-4 could be aggregated with the upper H Block to create a 10 megahertz band for the introduction of new low power services.

**C. Out-Of-Band Emissions Limits Should Be Consistent with Other CMRS Bands.**

The out-of-band emissions restrictions placed on AWS-4 licensees should be consistent with the limits established in other commercial mobile bands. Adopting standard limits enables existing commercial components to be more easily adapted to the new terrestrial mobile band. This, in turn, will lead to a more expeditious, broader, and more economical deployment of AWS-4 services. The out-of-band emissions limits proposed in the Notice appear to be generally consistent with this principle.<sup>20</sup>

**III. AWS-4 LICENSEES SHOULD HAVE MAXIMUM FLEXIBILITY TO DESIGN THEIR NETWORKS IN THE MANNER THAT BEST SERVES CONSUMERS.**

The AWS-4 service rules should give licensees broad flexibility to design and deploy terrestrial wireless networks in a way that is responsive to consumer demands so as to maximize the value of the spectrum resource both to the licensee and to the public. On issues such as the geographic and spectral size of the licenses and the technical rules that should apply to AWS-4 operations, service rules should enable licensees to make decisions based on commercial and technical factors, not regulatory constraints. Consistent with the treatment of other commercial bands, the rules should protect incumbent services and establish incentives to ensure that the spectrum is used in a matter that serves the public interest.

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<sup>20</sup> See Notice, Section III.B.1.

**A. AWS-4 Should Be Licensed On A MEA Basis.**

AWS-4 licenses should be based on the Commission's 52 Major Economic Areas ("MEA"), not the 176 Economic Areas ("EA") as proposed in the Notice.<sup>21</sup> Using MEAs strikes an appropriate balance between ensuring that a robust terrestrial deployment occurs and affording licensees sufficient flexibility to plan their deployments. License areas based on MEAs, combined with the modified performance requirements proposed by AT&T below,<sup>22</sup> would ensure that AWS-4 licensees provide service across the entire country, while allowing licensees to deploy their networks in a commercially reasonable manner.

**B. AWS-4 Should Be Licensed in Ten Megahertz Pairs.**

AT&T agrees with the Commission's proposal to issue paired AWS-4 licenses of 10 megahertz uplink and 10 megahertz downlink.<sup>23</sup> Ten megahertz pairs will be more useful in support of LTE and other mobile broadband technologies than smaller blocks. Additionally, as noted by the Commission, creating two paired licenses may facilitate multiple AWS-4 licensees in a given area.<sup>24</sup> Consistent with the principles of flexible use, an exclusive licensee should be permitted to operate its spectrum in this or any other configuration the licensee deems appropriate, subject to the Commission's interference protections and other technical rules.

**C. Other Service Rules Should Be Based on AWS-1.**

The Commission appropriately proposes to base the AWS-4 technical rules on those applied to the AWS-1 spectrum.<sup>25</sup> The AWS-1 band has been extremely successful as a platform

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<sup>21</sup> *Id.*, ¶ 26.

<sup>22</sup> *See infra*, Section IV.

<sup>23</sup> *Id.*, ¶ 22.

<sup>24</sup> *Id.*, ¶ 23.

<sup>25</sup> *Id.*, ¶ 29.

for the introduction of innovative mobile broadband services by a variety of competitors. AT&T supports the Commission's general approach of conforming AWS-4 to the AWS-1 service rules, as in the cases of power limits<sup>26</sup> and antenna height.<sup>27</sup> Additionally, as AWS-4 is intended to support mobile wireless broadband services comparable to those provided by AWS-1 licensees, the Commission should update its spectrum aggregation screen to include the AWS-4 spectrum, as has been the Commission's practice when new CMRS spectrum comes into service.<sup>28</sup>

#### **IV. PERFORMANCE REQUIREMENTS SHOULD BE INCREMENTAL AND SERVICE AREA BASED.**

The performance requirements applied to the AWS-4 band should promote robust nationwide deployment while reflecting the realities of deployment in a band newly authorized for mobile broadband service. The Commission's proposed performance requirements for AWS-4 licensees are too stringent and do not strike the appropriate balance between incentivizing deployment and affording licensees the flexibility necessary to put spectrum to its highest and best use. Performance requirements serve an important function in ensuring that spectrum does not lie fallow and is deployed promptly, consistent with the public interest. However, performance requirements should not be unreasonably punitive or overly aggressive. Under such requirements, licensees may find it more difficult to raise necessary capital or be rushed into sub-

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<sup>26</sup> *Id.*, ¶¶ 57-61.

<sup>27</sup> *Id.*, ¶¶ 62-64.

<sup>28</sup> *See, e.g.,* Sprint Nextel Corporation and Clearwire Corporation Applications for Consent to Transfer Control of Licenses, Leases and Authorizations, *Memorandum Opinion and Order*, 23 FCC Rcd 17570, 17596 ¶ 61 (2008) (updating spectrum screen to include AWS-1 and certain BRS spectrum); Applications of AT&T Inc. and Dobson Communications Corporation for Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 22 FCC Rcd 20295, 20307-08, 20315 ¶¶ 17, 35 (2007) (updating spectrum screen to include 700 MHz spectrum "given its availability and suitability on a nationwide basis for the provision of mobile telephony services").

optimal deployments. Performance requirements must balance the public's interest in an efficient network buildout with the practical realities faced by licensees.

Here, the Commission's proposal fails to strike the appropriate balance.<sup>29</sup> The initial AWS-4 performance benchmark, as proposed, would require licensees to offer service to at least thirty percent of their total AWS-4 population,<sup>30</sup> giving AWS-4 licensees an extremely compressed window of time in which to complete standardization, equipment development, and procurement before beginning a widespread network deployment. Under the AWS-4 second performance benchmark—which, as proposed, would require coverage of at least seventy percent of each EA within seven years<sup>31</sup>—licensees would then only have four additional years to complete what effectively amounts to a simultaneous buildout across every corner of the country.

AT&T proposes alternative performance requirements, modeled after the Upper 700 MHz C Block rules.<sup>32</sup> As discussed above,<sup>33</sup> AT&T recommends that the AWS-4 licenses be based on MEA service areas to increase licensee flexibility in spectrum deployment. Under AT&T's proposal, the AWS-4 licensee(s) would be required to cover 40% of the total population of each MEA within 4 years. The licensees would then be required to cover 75% of the total population of each MEA by the end of the license term. These buildout requirements will ensure a rapid deployment of mobile broadband services and are more consistent with Commission

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<sup>29</sup> See Notice, ¶ 92.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> See 47 C.F.R. § 27.14(h).

<sup>33</sup> See *supra*, Section III.A.

action in comparable bands that have been repurposed for terrestrial mobile use.<sup>34</sup> As such, this proposal will better serve the public interest while affording licensees the flexibility necessary to deploy expeditiously advanced mobile broadband services.

Compounding the overly burdensome proposed performance requirements, the Commission’s proposed penalty for failure to meet a construction requirement is too draconian and inconsistent with the requirements applicable to other comparable services. Under the proposal in the Notice, a licensee failing to meet the interim AWS-4 performance requirement would automatically have all of its AWS-4 licenses terminated.<sup>35</sup> A licensee failing to meet the final benchmark would automatically lose its license in each service area in which it missed the coverage requirement.<sup>36</sup> Terminating a license for failure to meet a performance benchmark—especially for missing an interim benchmark by only a *de minimis* amount, as is possible under the Commission’s proposal—would cut off service to users, strand investment and disserve the public interest. For example, under the Commission’s Interim Build-out Requirement, a licensee who offered service to 29 percent of its total population would have *all* of its AWS-4 licenses authorizations automatically terminated, despite its good-faith efforts to comply and despite the fact that it was already providing service to customers.

Instead, AT&T proposes that a “keep-what-you-use” rule should apply at the buildout deadline consistent with the practice in other commercial mobile bands. Under such a rule, if an AWS-4 licensee misses its final construction benchmark in a particular service area, it could have its authorization revoked in the portions of that service area that it does not cover. A “keep-

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<sup>34</sup> See, e.g., Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd 15289, ¶¶ 6, 153, 162 (2007).

<sup>35</sup> Notice, ¶ 94.

<sup>36</sup> *Id.*

what-you-use” rule would provide sufficient incentive for AWS-4 licensees to meet the performance requirements, would not risk leaving consumers without the service that they may have been relying on for years, and would treat AWS-4 licensees consistently with wireless operators in other commercial mobile bands.<sup>37</sup>

## **V. AT&T SUPPORTS THE 2 GHz EXTENSION BAND CONCEPT.**

The NPRM and NOI juxtapose alternative visions of the 2 GHz band. If the Commission elects to proceed in the near term with the NPRM proposals, as discussed above, AT&T favors authorizing terrestrial service throughout the 2 GHz band, and limiting MSS to the A Block. If, however, the Commission elects to take additional time and explore the alternative proposals in the NOI – essentially a holistic reexamination of the terrestrial mobile band plan – AT&T supports the 2 GHz Extension Band Concept.<sup>38</sup> By incorporating repurposed Federal government spectrum, the 2 GHz MSS band, and other currently unused terrestrial mobile allocations, the 2 GHz Extension Band Concept would advance the rationalization of the 2 GHz band while freeing up additional usable spectrum.

In comments in response to the Commission’s *2 GHz Public Notice*,<sup>39</sup> AT&T previously has supported taking a holistic approach to repurposing the 2 GHz band.<sup>40</sup> AT&T’s earlier proposal emphasized a coordinated method of repurposing the 2 GHz MSS spectrum that called for the pairing of federal spectrum from 1755-1800 MHz with AWS spectrum from 2155-2200

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<sup>37</sup> See, e.g., 47 C.F.R. §§ 22.947, 22.949, 27.14(h)(1)-(2).

<sup>38</sup> Notice, ¶ 137.

<sup>39</sup> Spectrum Task Force Invites Technical Input on Approaches to Maximize Broadband Use of Fixed/Mobile Spectrum Allocations in the 2 GHz Range, ET Docket No. 10-142, WT Docket Nos. 04-356, 07-195, *Public Notice*, 26 FCC Rcd 7587 (2011) (“*2 GHz Public Notice*”).

<sup>40</sup> See Comments of AT&T, ET Docket No. 10-142, WT Docket No. 04-356, 07-195 (filed Jul. 8, 2011).

MHz, and an asymmetric pairing of federal spectrum from 1695-1710 MHz with AWS and MSS spectrum resources at 1995-2025 MHz.<sup>41</sup> The National Telecommunications and Information Administration's ("NTIA") March 2012 assessment of the 1755-1850 MHz Band, however, maintains that some federal agencies would require up to 10 years to relocate and estimates a nearly \$18 billion cost to relocate federal operations from the band,<sup>42</sup> thus raising concerns regarding the short-term feasibility of AT&T's past proposal. In light of these challenges to full realization of AT&T's proposal, AT&T supports the 2 GHz Extension Concept as a near-term means of rationalizing the 2 GHz band.

The 2 GHz Extension Concept has considerable strengths. It frees 30 MHz of additional downlink spectrum to support PCS, AWS, or other lower band operations. It also pairs the 1695-1710 MHz band—which NTIA has indicated could be repurposed from Federal use within five years<sup>43</sup>—with 2180-2200 MHz, creating an asymmetric paired spectrum block that could be used for mobile broadband operations in the near-term. Importantly, the 2 GHz Extension Concept also preserves the possibility of pairing 1755-1780 MHz with 2155-2180 MHz in the future. As the Commission is aware, the wireless industry has long agreed that the 1755-1780 MHz/2155-2180 MHz pairing is one of the most desirable potential future extensions to existing wireless bands.<sup>44</sup> Moreover, Chairman Genachowski announced at CTIA that – working with NTIA – he

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<sup>41</sup> *Id.* at 4-7.

<sup>42</sup> U.S. Department of Commerce, "An Assessment of the Viability of Accommodating Wireless Broadband in the 1755-1850 MHz Band," March 2012, vi-xi ("NTIA Report").

<sup>43</sup> See U.S. Department of Commerce, "An Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHz Bands," Oct. 2010, *available at* [http://www.ntia.doc.gov/files/ntia/publications/fasttrackevaluation\\_11152010.pdf](http://www.ntia.doc.gov/files/ntia/publications/fasttrackevaluation_11152010.pdf) (last visited Apr. 20, 2012).

<sup>44</sup> See, e.g., Reply Comments of CTIA at 5-7, ET Docket No. 10-142, WT Docket No. 04-356, 07195 (Jul. 22, 2011) (citing comments from AT&T, Ericsson, Sprint Nextel, T-Mobile,

envisions that this spectrum could be reallocated and auctioned within 3 years.<sup>45</sup> Should the Commission move forward with the 2 GHz Extension Concept, it should also continue to work closely with NTIA to address the challenges identified in the NTIA Report and to make the 1755-1780/2155-2180 MHz pairing a reality.

Given the benefits of the 2 GHz Extension Concept and the important steps the proposal takes toward rationalizing the 2 GHz band, the Commission's alternative band plan proposal warrants serious consideration. However, in light of the complexity represented by the 2 GHz Extension Concept and the significant amount of time that will be required for its realization, the Commission should move with all appropriate haste regarding this proposal. Should the Commission decide to pursue the 2 GHz Extension Concept, it should issue a Notice of Proposed Rulemaking on the proposal promptly.

## **VI. CONCLUSION**

The Notice takes a significant step in advancing one of the goals of the National Broadband Plan – identifying additional spectrum for wireless broadband services, including repurposed MSS spectrum. Consistent with the Plan's objectives of maximizing the amount of spectrum available for mobile broadband, the Commission should authorize terrestrial mobile service throughout the 2 GHz band and limit MSS to the A Block. As the Commission moves ahead with crafting AWS-4 service rules, its primary objective should be to facilitate deployment of robust terrestrial mobile broadband services.

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and Verizon Wireless supporting the 1755-1780 MHz/2155-2180 MHz pairing); Notice of *Ex Parte* of Telecommunications Industry Association at 2, GN 09-51, WT Docket No. 06-150, PS Docket No. 06-229, DA-10-592, WT Docket No. 07-293, IB Docket No. 95-91, RM No. 11592, WT Docket No. 07-195, WT Docket No. 04-356 (Apr. 27, 2010) ("TIA also stated its strong opinion that that the AWS-3 spectrum should be paired with the 1755-1780 MHz band").

<sup>45</sup> See Julius Genachowski, Chairman, Federal Communications Commission, Prepared Remarks to International CTIA Wireless 2012 at 13, New Orleans, LA, May 8, 2012 *available at* [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db0508/DOC-313945A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0508/DOC-313945A1.pdf).

However, if the Commission intends to take more time to explore the alternative vision outlined in the Notice of Inquiry, AT&T supports the 2 GHz Extension Concept. If the Commission elects to pursue this alternative vision, it promptly should release a Notice of Proposed Rulemaking so clarifying.

Respectfully submitted,

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